

Title (en)

APPARATUS AND METHOD FOR WELL OPERATIONS

Title (de)

VORRICHTUNG UND VERFAHREN FÜR BOHRLOCHOPERATIONEN

Title (fr)

APPAREIL ET PROCÉDÉ POUR OPÉRATIONS DE PUITS

Publication

EP 2550424 A4 20171004 (EN)

Application

EP 11760105 A 20110323

Priority

- US 31681910 P 20100323
- US 2011029520 W 20110323

Abstract (en)

[origin: WO2011119668A1] A method for modifying a return fluid in a wellbore comprising disposing at least one valve along a drill pipe section of a drill string in the wellbore. At least one parameter of interest is determined at at least one location along the wellbore. At least one valve is controllably actuated to discharge at least a portion of at least one fluid from inside the drill string to an annulus in the wellbore to modify a local property of the return fluid in the annulus based at least in part on the measured parameter of interest.

IPC 8 full level

E21B 34/14 (2006.01); **E21B 21/10** (2006.01); **E21B 21/12** (2006.01); **E21B 41/00** (2006.01)

CPC (source: EP US)

E21B 21/082 (2020.05 - EP US); **E21B 21/103** (2013.01 - EP US); **E21B 21/12** (2013.01 - EP US); **E21B 34/066** (2013.01 - US); **E21B 41/0078** (2013.01 - EP US); **E21B 47/06** (2013.01 - US); **E21B 47/12** (2013.01 - EP US); **E21B 21/003** (2013.01 - US)

Citation (search report)

- [X] WO 0229200 A1 20020411 - TENNOEY ANDOR SVEIN [NO], et al
- [X] US 2009272580 A1 20091105 - DOLMAN LEE F [MX], et al
- [X] US 5343968 A 19940906 - GLOWKA DAVID A [US]
- [I] US 3175628 A 19650330 - DELLINGER THOMAS B
- [A] US 2003192695 A1 20031016 - DILLENBECK ROBERT LEE [US], et al
- [X] US 5407020 A 19950418 - BEAVERS ROGER L [US]
- [X] EP 0911483 A2 19990428 - HALLIBURTON ENERGY SERV INC [US]
- [X] WO 9749889 A1 19971231 - GRAY IAN [AU]
- See references of WO 2011119668A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2011119668 A1 20110929; EP 2550424 A1 20130130; EP 2550424 A4 20171004; EP 2550424 B1 20200610; EP 2550425 A1 20130130; US 10533387 B2 20200114; US 2013008647 A1 20130110; US 2013008648 A1 20130110; US 2017247959 A1 20170831; US 9279301 B2 20160308; WO 2011119675 A1 20110929

DOCDB simple family (application)

US 2011029520 W 20110323; EP 11760105 A 20110323; EP 11760110 A 20110323; US 2011029533 W 20110323; US 201113635481 A 20110323; US 201113635490 A 20110323; US 201715593023 A 20170511